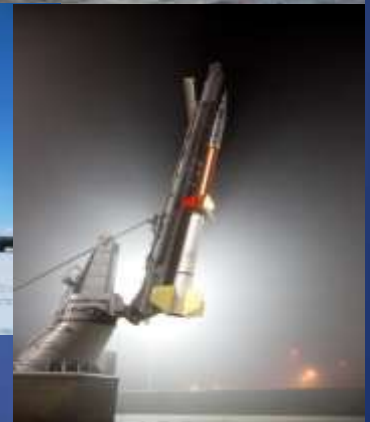


# ***NASA/Goddard Space Flight Center's Wallops Flight Facility***

***2012 and  
Beyond***

# 2012 - A Busy Year

- 35 sounding rocket launches
- 13-17 scientific balloons
- 7 aircraft science projects/  
914 flight hours
- 11 sounding rocket  
launches from Wallops
- Antares first launches



# Launch Madness

## Anomalous Transport Rocket Experiment (ATREX)

- March 15 – April 2
- Night
- 5 launches in about 5 minutes
- Study of upper level jet stream by Clemson University
- Chemical tracer released to “see” the winds
- May be visible throughout mid-Atlantic



# IceBridge

- Six year NASA study to map ice of Greenland/Arctic and Antarctica
- March – May in Greenland
- 325 flight hours
- Wallops' developed Airborne Topographic Mapper (ATM) measures ice elevation
- Wallops has mapped Greenland ice sheets since 1993.

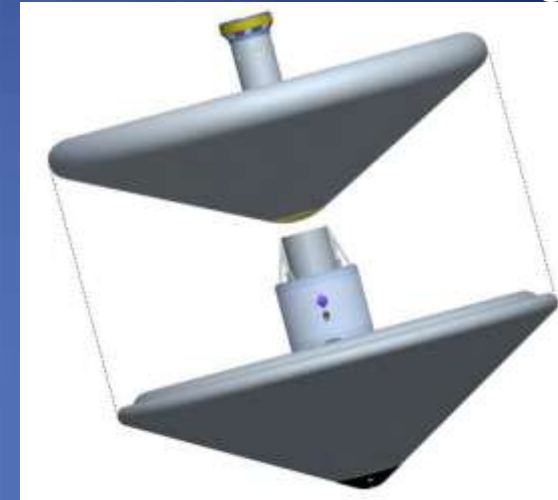




# Inflatable Reentry Vehicle Flight Experiment (IRVE-3)

- Demonstrate test technique, stability and survivability of an inflatable reentry aeroshell
- NASA Langley Research Center project
- Builds on 2009 IRVE-2 test
- Late April
- Black Brant XI sounding rocket

IRVE-2 drawing



IRVE-3 drawing

Inflatable Reentry Vehicle Concept



# Hurricane and Severe Storm Sentinel (HS3)

- 2 NASA-owned Global Hawks
- August – October, 2012 – 2014
- study of hurricane development
- 10 flights each year
- 30 hours duration
- Global Hawk Specs
  - 116 ft. wing span
  - 15 feet high
  - 44 feet long
  - 11,000 nautical mile range



# Education

- Student Internships
- Flight Education Opportunities
  - HASP (Balloon)
  - RockON/RockSat-C (sounding rocket – June 24)
  - RockSat-X (sounding rocket – Aug. 9)
- Educator Workshops
  - Wallops Rocket Academy for Teachers and Students (WRATS)
  - Wallops Balloon Experience for Education (WBEE)
  - Student Airborne Research Project (SARP)



# Facility Improvements

- Wallops Island Shoreline Protection
  - Protecting more than \$1B in assets
  - Extending rock seawall 1,800 feet
  - Placing 3,199,000 cubic yards of sand along 3.7 miles of shoreline
  - Expected completion summer 2012
- Main Base Entrance Reconfiguration
  - New badging office
  - Ease congestion at main gate
  - Improves safety
  - Expected completion summer 2012





# Antares (formerly Taurus II)

- Work continues towards first launch
- Va. Governor asked for \$4M to complete new launch pad
- Orbital is reassessing status and will provide launch update Feb. 9
- Prior to launch pad test we will have another community meeting to update status and what to expect



# Opportunities

- Wallops Research Park
- Uninhabited Aerial Systems
- Wallops Aircraft Fleet
- Expendable Launch Vehicles
- Navy Field Carrier Landing

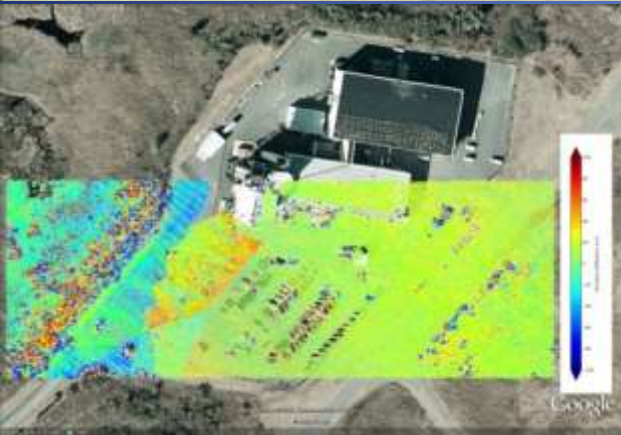


# Research Park

- Continuing to work with Accomack County, Commonwealth of Virginia, and Marine Science Consortium to develop park
- Va. Governor included \$4M for taxiway to connect park and Wallops runway in 2012 budget request



# Uninhabited Aerial Systems



- Establishment of NASA/Airborne Sciences Global Hawk Ground Station at WFF
- Addition of new UAS platforms managed by NASA/WFF
- Establishment of new North Wallops Island UAS Runway
- Earth Science and Technology Development
- Working with Va. and Md. Agencies to obtain FAA test site designation



# Aircraft Fleet Expansion

- High demand for use of airborne platforms
- Recently added C-23 Sherpa to fleet
- Possible additions:
  - C-130 aircraft
  - Huey helicopter



C-23 Sherpa



# Small and Medium Launch Vehicles

- Additional launch vehicles interested in Wallops beyond Antares and ISS re-supply
- Requires infrastructure Improvements
- New support facilities on north end of Wallops Island



# Navy Field Carrier Landing Practice

E-2C



C-2A



Day Landing on Aircraft Carrier



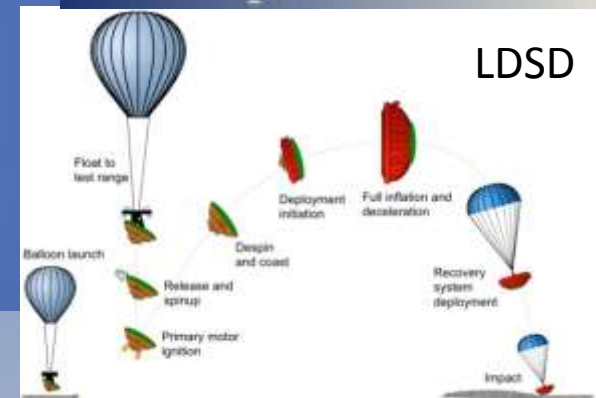
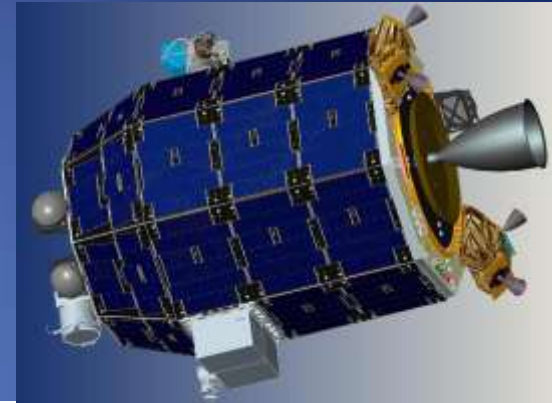
Night Approach to Aircraft Carrier



- Wallops officials met with the Navy in November 2011
- Practice Turboprop Landing Requirements
  - On average,
    - 5 training events per year for approximately 2-3 weeks each event
    - 13 training events for approximately 1 week each event
  - One 3 hour day period and/or one 3 hour night period per training day
- Navy conducting Environmental Assessment (EA) to examine potential impacts - completion expected in the Fall of 2013
  - NASA is a Cooperating Agency with Navy on EA
  - Wallops recognizes expressed concerns of nearby communities such as Trails End, and will work with Navy to ensure landing approaches minimize potential noise impacts

# Future Projects

- Lunar Atmosphere and Dust Environment Explorer (LADEE)
  - Launch mid-2013 from Wallops
  - Minotaur V
- Low Density Supersonic Decelerator (LDSD)
  - Qualification of new class of supersonic decelerators
  - **WFF role:** All aspects of balloon development and operations, some instrumentation
  - Flight test late 2013.
- Global Precipitation Measurement program
  - Launch in 2014
  - Wallops developed High Gain Antenna arm
  - Ground validation program





Our future looks bright!

Questions?